



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,927	04/12/2004	Junya Maruyama	07977-0297002	2114

26171 7590 06/24/2010
FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER

NIESZ, JAMIE C

ART UNIT	PAPER NUMBER
----------	--------------

2822

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

06/24/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 10/821,927	Applicant(s) MARUYAMA ET AL.	
	Examiner JAMIE NIESZ	Art Unit 2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 122-124, 126-140 and 171-183 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 122-124, 126-140 and 171-183 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed April 1, 2010.

Claim Objections

2. The claim objections regarding claims 102, 113, 129, 139 and 153-156 have been obviated by amendment and are therefore withdrawn.
3. Claims 140 and 174 are objected to because of the following informalities:
4. Claim 140 recited the limitation "the electronic appliance" in the third and fourth lines of the claim. This limitation, however, lacks antecedent basis in claim 140, and parent claim 137. It will instead be read as "the light emitting device." Appropriate correction is required.
5. Claims 175-179, which depend from independent claim 174, recited multiple limitations ("the second region", "the dry agent", "the third region", etc.) which lack antecedent basis in claim 174. It appears that claim 174 was meant to include the multi-region surface of the second substrate limitation and the dry agent limitation like those found in claim 127. Claim 174 will henceforth be read as follows:

A light emitting device comprising:

a display panel, the display panel comprising:

a first substrate;

a light emitting element over the first substrate; and

a second substrate over the light emitting element,

wherein a surface of the second substrate comprises a first region, a second region, and a third region, the first region bonded to the first substrate

Art Unit: 2822

with a layer having adhesion, the second region is located inside the first region and concaved relative to the first region, and the third region is located inside the second region and concaved relative to the second region,

wherein minute unevennesses are formed on a surface of the second substrate,

wherein a dry agent is provided in the third region,

wherein light emitted from the light emitting element is outputted through the second substrate, and

wherein the light outputted through the second substrate passes through the minute unevennesses.

6. Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 122-124, 126, 137-140, 171 and 173 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. Patent No. 5,239,228) in view of Murakami (U.S. Patent No. 6,250,765).

9. Regarding claim 122, Taniguchi discloses an electronic appliance (thin film electroluminescence device) comprising:

a display panel (Fig. 10), the display panel comprising:

a first substrate (11);
a light emitting element (14, luminescent layer) over the first substrate (11); and
a second substrate (51) over the light emitting element (14),
wherein light emitted from the light emitting element (14) is outputted through the second substrate (51; Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses. Attention is brought to the Murakami reference, which discloses a display panel (Fig. 4, $\beta 1$) wherein minute unevennesses are (Fig. 2, 1b) are formed on a surface of the display panel ($\beta 1$) and wherein the light outputted through the display panel ($\beta 1$) passes through the minute unevennesses. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display panel disclosed by Taniguchi to include wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses, as taught by Murakami, since the minute unevennesses provide an anti-glare coat layer which prevents external light from forming an image on the display.

10. Regarding claim 123, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

11. Regarding claim 124, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).

Art Unit: 2822

12. Regarding claim 126, Murakami discloses wherein the electronic appliance is one selected from the group consisting of a mobile telephone, a personal digital assistant, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Murakami abstract, a portable game machine, i.e. a mobile computer).

13. Regarding claim 137, Taniguchi discloses a light emitting device (thin film electroluminescence device, Fig. 10) comprising:

a first substrate (11);

a light emitting element (14, luminescent layer) over the first substrate (11); and

a second substrate (51) bonded to the first substrate (11), over the light emitting element (14),

wherein light emitted from the light emitting element (14) is outputted through the second substrate (51; Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses. Attention is brought to the Murakami reference, which discloses a display panel (Fig. 4, $\beta 1$) wherein minute unevennesses are (Fig. 2, 1b) are formed on a surface of the display panel ($\beta 1$) and wherein the light outputted through the display panel ($\beta 1$) passes through the minute unevennesses. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display panel disclosed by Taniguchi to

Art Unit: 2822

include wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses, as taught by Murakami, since the minute unevennesses provide an anti-glare coat layer which prevents external light from forming an image on the second substrate.

14. Regarding claim 138, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

15. Regarding claim 139, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).

16. Regarding claim 140, Murakami discloses wherein the light emitting device is one selected from the group consisting of a mobile telephone, a personal digital assistant, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Murakami abstract, a portable game machine, i.e. a mobile computer).

17. Regarding claims 171 and 173, Murakami discloses wherein heights of the minute unevennesses (Fig. 2, 1b) are set to be 0.1 micron to 3 micron (Col. 4, Lines 15-17).

18. Claims 127-136, 172 and 174-183 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi et al. (U.S. Patent No. 5,239,228) in view of Ebisawa et al. (U.S. Patent No. 6,284,342) and in further view of Murakami (U.S. Patent No. 6,250,765) .

Art Unit: 2822

19. Regarding claim 127, Taniguchi discloses an electronic appliance (thin film electroluminescence device) comprising:

a display panel (Fig. 10), the display panel comprising:

a first substrate (11);

a light emitting element (14, luminescent layer) over the first substrate (11); and

a second substrate (51) over the light emitting element (14),

wherein a surface of the second substrate (51) comprises a first region (sealing region), a second region (central region over light emitting layer 14) and a third region (53), the first region is bonded to the first substrate (11) with a layer having adhesion (52), the second region (central region) is located inside the first region (sealing region), and the third region (53) is located inside the second region (central region) and concaved relative to the second region,

wherein a dry agent (55) is provided in the third region (53; Col. 7, Lines 38-40), and

wherein light emitted from the light emitting element (14) is outputted through the second substrate (51, Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein the second region is concaved relative to the first region. Attention is brought to the Ebisawa reference, which discloses a similar display device (Fig. 1) comprising a first substrate (1) and a second substrate (3) bonded with a layer having adhesion (2). Ebisawa further discloses wherein the surface of the second substrate (3) has a first region (sealing region), a second region (inner

Art Unit: 2822

recess region) and a third region (desiccant, 6, region) and wherein the second region (inner recess region) is located inside the first region (sealing region) and concaved relative to the first region (sealing region). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device disclosed by Taniguchi to include the second region (central region) is concaved relative to the first region (sealing region), as taught by Ebisawa, since a concaved second (central) region can form a cavity above the light emitting element, similar to the cavity taught by Taniguchi Fig. 10, but using a thinner adhesive layer.

Taniguchi also does not disclose wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses. Attention is brought to the Murakami reference, which discloses a display panel (Fig. 4, $\beta 1$) wherein minute unevennesses are (Fig. 2, 1b) are formed on a surface of the display panel ($\beta 1$) and wherein the light outputted through the display panel ($\beta 1$) passes through the minute unevennesses. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display panel disclosed by Taniguchi to include wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses, as taught by Murakami, since the minute unevennesses provide an anti-glare coat layer which prevents external light from forming an image on the display.

20. Regarding claim 128, Ebisawa discloses wherein a permeable film (5, sheet having gas a water vapor permeability) is adhered to a part of the second region (inner

Art Unit: 2822

recess region) so that the dry agent (6, desiccant) is contained in the third region (see Fig. 1).

21. Regarding claim 129, Ebisawa discloses wherein the permeable film (5) is not in contact with the first substrate (1, see Fig. 1).

22. Regarding claim 130, Ebisawa discloses wherein the second region (inner recess region) is recessed by 160 micron to 350 micron relative to the first region (sealing region; the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).

23. Regarding claim 131, Ebisawa discloses wherein the second region (inner recess region) is recessed by 10 micron to 50 micron relative to the first region (sealing region; the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).

24. Regarding claim 132, Ebisawa discloses wherein the third region (desiccant region) is recessed by 50 micron to 150 micron relative to the second region (inner recess region; Col. 3, Lines 56-59).

25. Regarding claim 133, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

26. Regarding claim 134, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).

Art Unit: 2822

27. Regarding claim 135, Ebisawa discloses wherein a thickness of the layer having adhesion (2) is 10 micron or less (Col. 14, Lines 33-38).

28. Regarding claim 136, Murakami discloses wherein the electronic appliance is one selected from the group consisting of a mobile telephone, a personal digital assistant, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Murakami, abstract, a portable game machine, i.e. a mobile computer).

29. Regarding claim 172, Murakami discloses wherein heights of the minute unevennesses (Fig. 2, 1b) are set to be 0.1 micron to 3 micron (Col. 4, Lines 15-17).

30. Regarding claim 174, Taniguchi discloses a light emitting device (thin film electroluminescence device) comprising:

a display panel (Fig. 10), the display panel comprising:

a first substrate (11);

a light emitting element (14, luminescent layer) over the first substrate (11); and

a second substrate (51) over the light emitting element (14),

wherein a surface of the second substrate (51) comprises a first region (sealing region), a second region (central region over light emitting layer 14) and a third region (53), the first region is bonded to the first substrate (11) with a layer having adhesion (52), the second region (central region) is located inside the first region (sealing region), and the third region (53) is located inside the second region (central region) and concaved relative to the second region,

wherein a dry agent (55) is provided in the third region (53; Col. 7, Lines 38-40), and

wherein light emitted from the light emitting element (14) is outputted through the second substrate (51, Col. 7, Lines 8-15).

Taniguchi, however, does not disclose wherein the second region is concaved relative to the first region. Attention is brought to the Ebisawa reference, which discloses a similar display device (Fig. 1) comprising a first substrate (1) and a second substrate (3) bonded with a layer having adhesion (2). Ebisawa further discloses wherein the surface of the second substrate (3) has a first region (sealing region), a second region (inner recess region) and a third region (desiccant, 6, region) and wherein the second region (inner recess region) is located inside the first region (sealing region) and concaved relative to the first region (sealing region). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display device disclosed by Taniguchi to include the second region (central region) is concaved relative to the first region (sealing region), as taught by Ebisawa, since a concaved second (central) region can form a cavity above the light emitting element, similar to the cavity taught by Taniguchi Fig. 10, but using a thinner adhesive layer.

Taniguchi also does not disclose wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses. Attention is brought to the Murakami reference, which discloses a display panel (Fig. 4, $\beta 1$) wherein minute unevennesses are (Fig. 2, 1b) are formed on a surface of the display panel ($\beta 1$) and

Art Unit: 2822

wherein the light outputted through the display panel ($\beta 1$) passes through the minute unevennesses. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the display panel disclosed by Taniguchi to include wherein minute unevennesses are formed on a surface of the second substrate and wherein the light outputted through the second substrate passes through the minute unevennesses, as taught by Murakami, since the minute unevennesses provide an anti-glare coat layer which prevents external light from forming an image on the display.

31. Regarding claim 175, Ebisawa discloses wherein a permeable film (5, sheet having gas a water vapor permeability) is adhered to a part of the second region (inner recess region) so that the dry agent (6, desiccant) is contained in the third region (see Fig. 1).

32. Regarding claim 176, Ebisawa discloses wherein the permeable film (5) is not in contact with the first substrate (1, see Fig. 1).

33. Regarding claim 177, Ebisawa discloses wherein the second region (inner recess region) is recessed by 160 micron to 350 micron relative to the first region (sealing region; the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).

34. Regarding claim 178, Ebisawa discloses wherein the second region (inner recess region) is recessed by 10 micron to 50 micron relative to the first region (sealing region; the sealing plate 3 is preferably held above the substrate about 1 to 500 microns, which

Art Unit: 2822

may be accomplished through a spacer, or providing the sealing plate with a recess, Col. 4, Lines 49-63).

35. Regarding claim 179, Ebisawa discloses wherein the third region (desiccant region) is recessed by 50 micron to 150 micron relative to the second region (inner recess region; Col. 3, Lines 56-59).

36. Regarding claim 180, Taniguchi discloses wherein the first substrate (11) is a glass substrate (Col. 3, Lines 33 and 34).

37. Regarding claim 181, Taniguchi discloses wherein the first substrate (11) and second substrate (51) are a glass substrate (Col. 3 Lines 33 and 34 and Col. 7, Line 8).

38. Regarding claim 182, Ebisawa discloses wherein a thickness of the layer having adhesion (2) is 10 micron or less (Col. 14, Lines 33-38).

39. Regarding claim 183, Murakami discloses wherein the electronic appliance is one selected from the group consisting of a mobile telephone, a personal digital assistant, an electronic book, a video camera, a personal computer, an image reproduction apparatus, a digital camera and a mobile computer (Murakami, abstract, a portable game machine, i.e. a mobile computer).

Response to Arguments

40. Applicant's arguments with respect to claims 122-124 and 126 and claims 127-140 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

41. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2822

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

42. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE NIESZ whose telephone number is (571)270-7874. The examiner can normally be reached on Monday through Thursday 8-6:30 EST.

44. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

45. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2822

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zandra V. Smith/
Supervisory Patent Examiner, Art Unit 2822

/JAMIE NIESZ/
Examiner
Art Unit 2822